

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended) A power supply comprising:

an AC/DC converter which converts an input AC power into DC power and outputs the DC power to an output terminal thereof, said AC/DC converter having power factor improvement function;

a DC/DC converter ~~whose~~having an input terminal is connected to the output terminal of said AC/DC converter, said DC/DC converter converting a DC voltage inputted thereto into a voltage value to be applied to ~~and used at~~ a load;

a DC converter ~~whose~~having a first terminal is connected to the output terminal of said AC/DC converter and the input terminal of said DC/DC converter; and

DC power storage means which is connected to a second terminal of said DC converter, and which supplies said DC/DC converter with a DC power through said DC converter;

wherein ~~usually~~, said load is supplied with the DC power from said AC/DC converter through said DC/DC converter, and said DC power storage means connected to said second terminal of said DC converter is supplied with the DC power ~~to be charged~~ from said AC/DC converter for charging using a path through the output terminal of said AC/DC converter, the first terminal of said DC converter and said DC converter; and

wherein, said DC converter comprising an actuating signal generating portion having an AND logic circuit, and said AND logic circuit is supplied with a power interruption detecting signal and an actuating command, and

when the input AC power is not applied to said AC/DC converter and said actuating command is ON, said load is supplied with the DC power from said DC power storage means using a path through said second terminal, said DC converter, said first terminal and said DC/DC converter in order.

Claim 2 (Original) A power supply according to claim 1, wherein said DC converter comprises:

a first converter having an AC terminal, and a DC terminal which is said first terminal connected to the input terminal of said DC/DC converter;

a transformer having a high-voltage side winding connected to the AC terminal of said first converter, and a low-voltage side winding; and

a second converter having an AC terminal connected to the low-voltage side winding, and a DC terminal which is said second terminal connected to said DC power storage means.

Claim 3 (New) A power supply according to claim 1, wherein said DC power storage means is a secondary battery or a capacitor.

Claim 4 (New) A power supply according to claim 1, wherein said AC/DC converter is supplied with commercial AC power of 100 V to 200 V.

Claim 5 (New) A power supply according to claim 1, wherein said DC power storage means voltage is 40 V to 50 V.

Claim 6 (New) A power supply comprising:

an AC/DC converter which converts an input AC power into DC power and outputs the DC power to an output terminal thereof;

a DC/DC converter having an input terminal connected to the output terminal of said AC/DC converter, said DC/DC converter converting a DC voltage inputted thereto into a voltage to be applied to a load;

a DC converter having a first terminal connected to the output terminal of said AC/DC converter and the input terminal of said DC/DC converter; and

a DC power storage unit which is connected to a second terminal of said DC converter to receive storage power, and which supplies said DC/DC converter with a DC power through said DC converter;

wherein said load is supplied with the DC power from said AC/DC converter through said DC/DC converter, and said DC power storage unit connected to said second terminal of said DC converter is supplied with the DC power from said AC/DC converter for charging using a path through the output terminal of said AC/DC converter, the first terminal of said DC converter and said DC converter; and

wherein, said DC converter comprising a back-up power actuating unit including an AND logic circuit, and where differing inputs of the AND logic circuit are supplied with a power interruption detecting signal and a back-up power actuating command signal, and when both the power interruption detecting signal indicates

that input AC power is not applied to said AC/DC converter and the actuating command signal enables back-up power, said load is supplied with the DC power from said DC power storage unit using a path through said second terminal, said DC converter, said first terminal and said DC/DC converter.

Claim 7 (New) A power supply according to claim 6, wherein said DC converter comprises:

a first converter having an AC terminal, and a DC terminal which is said first terminal connected to the input terminal of said DC/DC converter;

a transformer having a high-voltage side winding connected to the AC terminal of said first converter, and a low-voltage side winding; and

a second converter having an AC terminal connected to the low-voltage side winding, and a DC terminal which is said second terminal connected to said DC power storage unit.

Claim 8 (New) A power supply according to claim 6, wherein said DC power storage unit is a secondary battery or a capacitor.

Claim 9 (New) A power supply according to claim 6, wherein said AC/DC converter is supplied with commercial AC power of 100 V to 200 V.

Claim 10 (New) A power supply according to claim 6, wherein said DC power storage unit voltage is 40 V to 50 V.